

10/667,590

(FILE 'HOME' ENTERED AT 09:41:38 ON 14 JUN 2004)

FILE 'REGISTRY' ENTERED AT 09:41:51 ON 14 JUN 2004

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 09:42:25 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 64 TO ITERATE

100.0% PROCESSED 64 ITERATIONS

8 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 801 TO 1759

PROJECTED ANSWERS: 8 TO 329

L2 8 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 09:42:30 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 1279 TO ITERATE

100.0% PROCESSED 1279 ITERATIONS

201 ANSWERS

SEARCH TIME: 00.00.01

L3 201 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

155.42

155.63

FILE 'CAPLUS' ENTERED AT 09:42:36 ON 14 JUN 2004

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FILE COVERS 1907 - 14 Jun 2004 VOL 140 ISS 25

FILE LAST UPDATED: 13 Jun 2004 (20040613/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s l3/prep
      125 L3
      3158613 PREP/RL
L4      81 L3/PREP
        (L3 (L) PREP/RL)
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```
=> s l4 and magnesium catalyst
      403781 MAGNESIUM
      657973 CATALYST
      1337 MAGNESIUM CATALYST
        (MAGNESIUM(W)CATALYST)
L5      0 L4 AND MAGNESIUM CATALYST
```

```
=> s l4 and magnesium
      403781 MAGNESIUM
L6      1 L4 AND MAGNESIUM
```

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=> d bib abs
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L6  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
AN  2001:290456  CAPLUS
DN  135:92710
TI  Synthesis of Ferrocenyl Alkenes, Dienes, and Enynes via Samarium Diiodide
    Promoted Tandem Addition and Dehydration of Ferrocenyl Carbonyls with
    Halides
AU  Jong, Shean-Jeng; Fang, Jim-Min
CS  Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan
SO  Journal of Organic Chemistry (2001), 66(10), 3533-3537
    CODEN: JOCEAH; ISSN: 0022-3263
PB  American Chemical Society
DT  Journal
LA  English
OS  CASREACT 135:92710
AB  A practical method for preparation of ferrocenyl alkenes, dienes, and enynes
    from ferrocenyl carbonyls was explored. A one-pot operation using
    samarium diiodide to promote the condensation reactions of
    ferrocenecarboxaldehyde, acetylferrocene, benzoylferrocene, and
    butanoylferrocene with benzyl bromides, allyl bromide, propargyl bromide,
    and 1-bromo-3-chlorobutane gave the olefinic products in very high yields.
    The condensation reactions were also achieved by using catalytic amts. of
    SmI2 with magnesium to regenerate the divalent samarium reducing
    agent.
RE.CNT  57  THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
          ALL CITATIONS AVAILABLE IN THE RE FORMAT
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=> s l4 and py<2002
      21548852 PY<2002
L7      70 L4 AND PY<2002
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=> d 1-70 bib abs
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L7  ANSWER 1 OF 70  CAPLUS  COPYRIGHT 2004 ACS on STN
AN  2002:239478  CAPLUS
DN  137:125251
TI  Asymmetric induction in the synthesis of 3,4,5-trisubstituted
    ferrocenyl-4,5-dihydropyrazoles
AU  Klimova-Berestneva, T.; Garcia, M. Martinez; Meleshonkova, N. N.; Klimova,
```

E. I.  
 CS National Autonomus University of Mexico, Mexico, Mex.  
 SO Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2001), 71(10), 1626-1631  
 CODEN: RJGCEK; ISSN: 1070-3632  
 PB MAIK Nauka/Interperiodica Publishing  
 DT Journal  
 LA English  
 OS CASREACT 137:125251  
 AB The asym. induction in the synthesis of 3,4,5-trisubstituted 4,5-dihydropyrazoles with ferrocenyl substituents, starting from the E and Z isomers of  $\alpha,\beta$ -unsatd. ketones was studied. A high diastereoselectivity was revealed at the 1,2 chiral center  $\rightarrow$  chiral center induction, which is independent of the configuration of the starting chalcones. (E)- and (Z)-2-(ferrocenylmethylene)cyclohexanones were condensed with hydrazine hydrate in EtOH and the products were N-acetylated using Ac<sub>2</sub>O to give 55% and 5% of cis- and trans-2-acetyl-3-ferrocenyl-3,3a,4,5,6,7-hexahydro-2H-indazole from the E reactant and 65% and 7% from the Z isomer.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:33408 CAPLUS  
 DN 136:294920  
 TI Synthesis of symmetric and unsymmetric 1,1'-dialkenylferrocenes via samarium diiodide promoted reactions of 1,1'-diacetylferrocene with halides

AU Jong, Shean-Jeng; Fang, Jim-Min; Liu, Yi-Hung; Wang, Y.  
 CS Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan  
 SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2001), 48(6A), 1041-1046  
 CODEN: JCCTAC; ISSN: 0009-4536  
 PB Chinese Chemical Society  
 DT Journal  
 LA English  
 OS CASREACT 136:294920  
 AB Monoalkenylferrocenes were prepared from 1,1'-diacetylferrocene and appropriate benzyl bromides by the promotion of samarium diiodide. A practical method for preparation of both sym. and unsym. dialkenylferrocenes was also explored. The reactions were stereoselective to give only (E) double bonds. The unsym. dialkenylferrocene bearing electron-donating substituent (e.g. methoxy group) and electron-withdrawing substituent (e.g. cyano group) on different Ph rings likely exhibits a large nonlinear optical property.

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

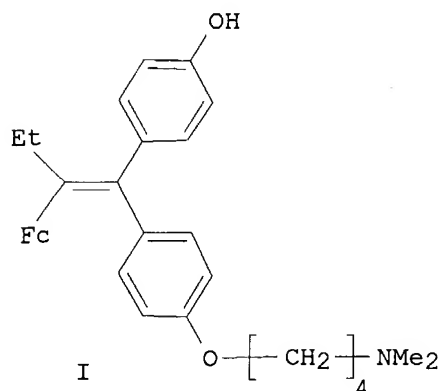
L7 ANSWER 3 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:879012 CAPLUS  
 DN 136:200271  
 TI Ferrocenyl substituted chlorostilbenes and butadienes

AU Senthil Kumar, K.; Kumara Swamy, K. C.  
 CS School of Chemistry, University of Hyderabad, Andhra Pradesh, Hyderabad, 500046, India  
 SO Journal of Organometallic Chemistry (2001), 637-639, 616-620  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 OS CASREACT 136:200271  
 AB The readily accessible  $\alpha$ -chlorophosphonates cyclo-

(OCH<sub>2</sub>CMe<sub>2</sub>CH<sub>2</sub>O)P(O)CH(Cl)-C<sub>6</sub>H<sub>4</sub>-4-R (R = Me, OMe, Cl, H) react with ferrocenecarboxaldehyde in the presence of NaH [Horner-Wadsworth-Emmons reaction] to give good yields of ferrocenyl substituted chlorostilbenes. The novel bis ferrocenyl butadiene C<sub>5</sub>H<sub>5</sub>FeC<sub>5</sub>H<sub>4</sub>CH:CHC(CN):CHC<sub>5</sub>H<sub>4</sub>FeC<sub>5</sub>H<sub>5</sub> (9) as well as the ferrocenyl 2-cyano-1,3-butadienes 4-R-C<sub>6</sub>H<sub>4</sub>CH:CHC(CN):CHC<sub>5</sub>H<sub>4</sub>FeC<sub>5</sub>H<sub>5</sub> (R = Me, OMe, Cl) were obtained by using the new allylphosphonate cyclo-(OCH<sub>2</sub>CMe<sub>2</sub>CH<sub>2</sub>O)P(O)CH<sub>2</sub>C(CN):CHC<sub>5</sub>H<sub>4</sub>FeC<sub>5</sub>H<sub>5</sub>; the latter compound was prepared in good yields by the reaction of the Baylis-Hillman adduct, C<sub>5</sub>H<sub>5</sub>FeC<sub>5</sub>H<sub>4</sub>CH(OH)C(CN):CH<sub>2</sub>, with the cyclic chlorophosphite (OCH<sub>2</sub>CMe<sub>2</sub>CH<sub>2</sub>O)PCl. The electrochem. behavior of the ferrocenyl compds. thus synthesized was studied; two reversible 1-electron processes are observed in the case of compound 9 suggesting a cooperative interaction between the two ferrocenyl residues.

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:878999 CAPLUS  
DN 136:200269  
TI Studies on organometallic selective estrogen receptor modulators. (SERMs)  
Dual activity in the hydroxy-ferrocifen series  
AU Top, Siden; Vessieres, Anne; Cabestaing, Claude; Laïos, Ionna; Leclercq, Guy; Provot, Christian; Jaouen, Gerard  
CS Ecole Nationale Supérieure de Chimie de Paris, Paris, 75231, Fr.  
SO Journal of Organometallic Chemistry (2001), 637-639, 500-506  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
OS CASREACT 136:200269  
GI



AB Synthesis of title compound I (Fc = ferrocenyl), a ferrocene derivative of the antiestrogenic drug hydroxytamoxifen bearing a basic chain-O(CH<sub>2</sub>)<sub>n</sub>N(CH<sub>3</sub>)<sub>2</sub> with n = 4 is presented, together with both studies of its antiproliferative effect on the hormone-dependent MCF7 cell line (estrogen receptor pos. cells) and of its genotoxicity. This mol. is easily prepared via a McMurry coupling reaction. The antiproliferative effect found for I at an incubation molarity of 1 μM was very close to that found for the usual reference mol., namely OH-tamoxifen. In addition to its structural antiestrogenic effect, I showed cytotoxic activity probably due to the vectored ferrocene. This genotoxic component was confirmed by a 3D

(damaged DNA detection) test, that permits identification and quantification of lesions induced on DNA. Some key interactions of I docked into the alpha-estrogen receptor binding site were also shown.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:878967 CAPLUS  
DN 136:200263  
TI Synthesis of controlled  $\pi$ -extended conjugate nanostructures of 1,1'-ferrocene  
AU Rodriguez, Jose-Gonzalo; Pleite, Sheila  
CS Facultad de Ciencias, C1, Departamento de Quimica Organica, Universidad Autonoma, Madrid, 28049, Spain  
SO Journal of Organometallic Chemistry (2001), 637-639, 230-239  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
OS CASREACT 136:200263  
AB Synthesis of the (E,E)-1,1'-ferrocene nanostructures having controlled  $\pi$ -extended conjugation was satisfactory carried out starting of 1'-[2-(1,3-dioxolan)]-1-formylferrocene (1). The mol. unit (E)-1'-[2-(1,3-dioxolan)]-1-[ $\beta$ -(p-iodophenyl)ethenyl]ferrocene (2), was obtained in excellent yield by treatment of 1 with p-iodobenzyltriphenylphosphonium ylide followed by Z E isomerization, catalyzed by iodine, in quant. yield. Compound (E)-2 was transformed in (E)-1'-[2-(1,3-dioxolan)]-1-[ $\beta$ -(4-(3-hydroxy-3-methyl-but-1-ynyl)-phenyl)-ethenyl]ferrocene, (E)-4, by palladium catalyzed cross-coupling with 2-methyl-but-3-yn-2-ol. (E)-4 gives (E)-1-[ $\beta$ -(4-ethynylphenyl)-ethenyl]-1'-[2-(1,3-dioxolan)]ferrocene (E)-5 by powder sodium hydroxide treatment. The mol. unit (E,E)-1-[ $\beta$ -(4-( $\beta$ -(1'-formyl ferrocenyl)-ethenyl)-phenylethynyl)-phenyl-ethenyl]-1'-formylferrocene, (E,E)-6, was synthesized by palladium catalyzed cross-coupling between the p-iodophenyl derivative (E)-2 and their ethynyl derivative (E)-5, in good yield.  
The (E,E)-1,1'-(p-iodophenyl)ethenylferrocene, (E,E)-7, was synthesized by reaction between 1,1'-diformylferrocene and the p-iodobenzyltriphenylphosphonium ylide, as a mixture of isomers which were isolated. Moreover, isomerization of the Z,Z and E,Z mixture to the E,E isomer, was induced by sunlight exposure, catalyzed by iodine, in quant. yield. The (E,E)-1,1'-[ $\beta$ -(4-ethynylphenyl)-ethenyl]ferrocene, (E,E)-10, was synthesized in good yield, by palladium catalyzed cross-coupling of compound (E,E)-7 with 2-methyl-but-3-yn-2-ol, followed by powder sodium hydroxide treatment.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:878962 CAPLUS  
DN 136:200262  
TI Facile synthesis of bidimensional ferrocenyl-based branched oligomers by palladium-catalyzed coupling reactions  
AU Peruga, Arantxa; Mata, Jose A.; Sainz, Daniel; Peris, Eduardo  
CS Departamento de Quimica Inorganica y Organica, Universitat Jaume I, Castellon, E-12080, Spain  
SO Journal of Organometallic Chemistry (2001), 637-639, 191-197  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
OS CASREACT 136:200262

AB Ferrocenyl-based star-shaped complexes were obtained by Pd-catalyzed reactions. The synthetic method reported shows an advantage over the traditional Wittig reaction for the synthesis of olefinated compds., both in yields and in selectivity towards the all-E isomers. The electrochem. of the compds. was studied. The crystal structure of E-ferrocenyl-4-(vinylphenyl)vinylene, one of the starting complexes to the star-shaped compds., was determined by single crystal x-ray diffraction.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:805742 CAPLUS

DN 136:87220

TI Organometallic dyes: Part 1. Synthesis of orange to cyan dyes based on donor-conjugated-acceptor chromogenes using ferrocene as the donor group

AU Asiri, Abdullah Mohamed

CS Chemistry Department, Faculty of Science, King Abdul-Aziz University, Jeddah, 21589, Saudi Arabia

SO Applied Organometallic Chemistry (2001), 15(11), 907-915

CODEN: AOCHEX; ISSN: 0268-2605

PB John Wiley & Sons Ltd.

DT Journal

LA English

AB A novel series of organometallic donor-conjugated-acceptor dyes derived from ferrocene as the donor group have been synthesized via the Knoevenagel reaction of ferrocene carboxaldehyde and various active methylene compds. to give a range of dyes ranging from orange to blue-green in color. The most bathochromic dye is that derived from dialkyl thiobarbituric acid and the least is that derived from the tetralone. The dyes showed an unusual neg. solvatochromism as the solvent polarity increased. All dyes synthesized are expected to have some non-linear optical properties, as evidenced from the pronounced solvatochromism.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:590234 CAPLUS

DN 135:331522

TI Selective synthesis of 1-aryl-2-ferrocenylethylene by cross-metathesis

AU Yasuda, Tomohiro; Abe, Jiro; Iyoda, Tomokazu; Kawai, Tadashi

CS Department of Applied Chemistry, Graduate School of Engineering, Tokyo Metropolitan University, Tokyo, 192-0397, Japan

SO Chemistry Letters (2001), (8), 812-813

CODEN: CMLTAG; ISSN: 0366-7022

PB Chemical Society of Japan

DT Journal

LA English

OS CASREACT 135:331522

AB Novel synthesis of  $\pi$ -conjugated mols. by cross-metathesis reaction of vinylferrocene with a series of vinylarenes was investigated with a molybdenum-based Schrock catalyst (CHCMe<sub>2</sub>Ph)Mo(N-2,6-i-Pr<sub>2</sub>C<sub>6</sub>H<sub>3</sub>)[OCMe(CF<sub>3</sub>)<sub>2</sub>]<sub>2</sub> (1). The cross-metathesis reactions occurred successfully and the cross-metathesis product, i.e., heterodimers, were readily obtained selectively, together with only small amts. of the corresponding self-dimers. Thus, 1 catalyzed cross-metathesis of vinylferrocene with 2-vinylnaphthalene in PhMe gave 100% 1-ferrocenyl-2-(2-naphthyl)ethylene, the crystal structure of which was determined

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:360411 CAPLUS  
 DN 135:122877  
 TI Alkyne Metathesis Graft Polymerization: Synthesis of Poly(ferricinium)-Based Silica Supports for Anion-Exchange Chromatography of Oligonucleotides  
 AU Eder, Karoline; Reichel, Erwin; Schottenberger, Herwig; Huber, Christian G.; Buchmeiser, Michael R.  
 CS Institute of Analytical Chemistry and Radiochemistry and Institute of General Inorganic and Theoretical Chemistry, University of Innsbruck, Innsbruck, A-6020, Austria  
 SO Macromolecules (2001), 34(13), 4334-4341  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB 1-[2-(3-Ethynylphenyl)ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene (I) was prepared via Wittig- and chloro-Wittig-type reactions. I reacts with the well-defined Schrock initiator Mo(N-2,6-Me2C6H3)(CHCMe2Ph)(OCMe(CF3)2)2 (II) via  $\alpha$ -addition. The resulting class VI polymerization system allows the living polymerization of I up to a d.p. of 150. Mesoporous and nonporous silica (Nucleosil 300-5 and Micra, resp.) with different sp. surface area (100 and 2 m<sup>2</sup>/g, resp.) were surface-derivatized with trichloro-2-norbornen-5-ylsilane, leading to an average surface functionalization of 230 and 50  $\mu$ mol norbornene/g, resp. I, ethynylferrocene, and 1-[2-(4-ethynylphenyl)ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene were surface-grafted onto these silica supports via alkyne metathesis polymerization using II. Typical amts. of grafted monomer were in the range 5-50  $\mu$ mol/g. The resulting poly(ferrocene)-grafted supports were subsequently oxidized with iodine to the corresponding poly(ferricinium)-grafted supports and successfully used for anion-exchange chromatog. of oligonucleotides.  
 RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:312313 CAPLUS  
 DN 135:92966  
 TI Ferrocenyl- and octamethylferrocenyl-substituted phenylenevinylene-, thienylenevinylene-, and 1,1'-ferrocenylenevinylene spaced ethynes: synthesis, metathesis polymerization, and polymer properties  
 AU Buchmeiser, Michael R.; Hallbrucker, Andreas; Kohl, Ingrid; Schuler, Norbert; Schottenberger, Herwig  
 CS Institute of Analytical Chemistry and Radiochemistry, University of Innsbruck, Innsbruck, A-6020, Austria  
 SO Designed Monomers and Polymers (2000), 3(4), 421-445  
 CODEN: DMPOF3; ISSN: 1385-772X  
 PB VSP BV  
 DT Journal  
 LA English  
 AB The preparation of five different conjugatively spaced ferrocenyl- and octamethylferrocenyl-substituted terminal alkynes and their metathesis polymerization using the well-defined Schrock-type catalyst of general formula Mo(N-2,6-Me2-C6H3)(CHCMe2Ph)(OCMe(CF3))2 is described. Besides their progenitors, the novel target ethynes [2-(2-ethynylphenyl)ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene (I), [2-[(5-ethynyl)thien-2-yl]ethenyl]ferrocene (II), [2-[(5-ethynyl)thien-2-yl]ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene (III), [2-[4-(ethynyl)phenyl]ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene, and (E)-[2-(ethynylferrocenyl)ethenyl]-1',2,2',3,3',4,4',5-octamethylferrocene were prepared. All the monomers undergo  $\beta$ -addition with the initiator.

Based on the NMR data of the first insertion products of I, II, and III, a cis configuration is assigned to the double bond in the corresponding first insertion products, while the double bonds in the corresponding polymers are virtually all trans, indicating a fast cis-trans isomerization. The extent of conjugated domains in the corresponding polymers that may be prepared in a living manner up to a d.p. (DP) of 40-50 was determined by UV-visible spectroscopy. While the use of p-substituted phenylene- and 1,3-disubstituted thiophene spacers resulted in polymers with an effective conjugation length ( $N_{eff}$ )  $\leq 10$ , o-phenylene spacers allowed the preparation of polymers with  $N_{eff}$  values up to 30. Finally, differential scanning calorimetry (DSC) was utilized to identify and characterize phase transitions. These data provide further evidence for the stiff and rigid character of both the conjugated backbone and the ferrocene-substituted side-chains.

RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:290456 CAPLUS  
DN 135:92710  
TI Synthesis of Ferrocenyl Alkenes, Dienes, and Enynes via Samarium Diiodide Promoted Tandem Addition and Dehydration of Ferrocenyl Carbonyls with Halides  
AU Jong, Shean-Jeng; Fang, Jim-Min  
CS Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan  
SO Journal of Organic Chemistry (2001), 66(10), 3533-3537  
CODEN: JOCEAH; ISSN: 0022-3263  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 135:92710  
AB A practical method for preparation of ferrocenyl alkenes, dienes, and enynes from ferrocenyl carbonyls was explored. A one-pot operation using samarium diiodide to promote the condensation reactions of ferrocenecarboxaldehyde, acetylferrocene, benzoylferrocene, and butanoylferrocene with benzyl bromides, allyl bromide, propargyl bromide, and 1-bromo-3-chlorobutane gave the olefinic products in very high yields. The condensation reactions were also achieved by using catalytic amts. of  $SmI_2$  with magnesium to regenerate the divalent samarium reducing agent.

RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:279073 CAPLUS  
DN 135:107430  
TI Solvent-free synthesis of ferrocenylethene derivatives  
AU Liu, Wan-yi; Xu, Qi-hai; Ma, Yong-xiang; Liang, Yong-min; Dong, Ning-li; Guan, De-peng  
CS National Laboratory of Applied Organic Chemistry, Lanzhou University, Lanzhou, 730000, Peop. Rep. China  
SO Journal of Organometallic Chemistry (2001), 625(1), 128-131  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
OS CASREACT 135:107430  
AB Herein, the authors report a fast, mild, efficient and simple Wittig reaction in a dry state to get ferrocenylethene derivs. The Z and E isomers can be separated by chromatog. and many isomers were characterized for the 1st time. Thus, grinding  $RCHO$  ( $R = Fc, Ph, 4-FcC_6H_4, 4-MeOC_6H_4$ ) with 1 equiv  $R_1CH_2P+Ph_3X-$  ( $R_1 = Ph, X = Cl; R_1 = Fc, X = iodide; R_1 = 4-ClC_6H_4, 4-BrC_6H_4, 3-O_2NC_6H_4, Bz, 4-BrC_6H_4CO, H, X = Br$ ) and 1.5 equiv NaOH with a



pestle in a mortar at room temperature or held after grinding at 65° gave 62-100% conversions to afford Z/E mixts. of RCH:CHR1 in which the E isomer predominated.

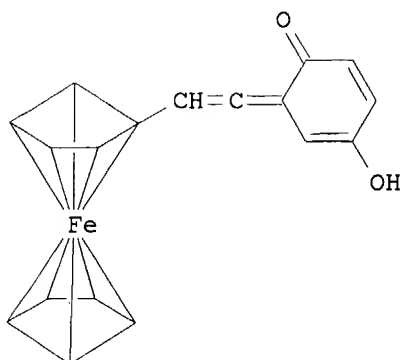
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:895690 CAPLUS  
DN 134:179057  
TI 57Fe-Mossbauer spectroscopic study of monomeric and polymeric ferrocenyl- and octamethylferrocenyl-substituted ethynes  
AU Schottenberger, H.; Buchmeiser, M. R.; Herber, R. H.  
CS Institute of General, Inorganic and Theoretical Chemistry, University of Innsbruck, Innsbruck, A-6020, Austria  
SO Journal of Organometallic Chemistry (2000), 612(1-2), 1-8  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
AB A series of four monomeric and four polymeric ferrocenyl- and octamethylferrocenyl-substituted 1-alkynes, ethynylferrocene (I), (o-ethynylphenyl)ferrocene (II), 1-[2-(o-ethynylphenyl)ethen-1-yl]-1',2,2',3,3',4,4',5-octamethylferrocene (III), novel 1-[2-(o-ethynylphenyl)ethen-1-yl]-1',2,2',3,3',4,4',5-octamethylferrocenium hexafluorophosphate, and poly(ethynylferrocene) (IV), poly[(o-ethynylphenyl)ferrocene] (V), poly[1-[2-(o-ethynylphenyl)ethen-1-yl]-1',2,2',3,3',4,4',5-octamethylferrocene] (VI), and novel poly[1-[2-(o-ethynylphenyl)ethen-1-yl]-1',2,2',3,3',4,4',5-octamethylferrocenium hexafluorophosphate], have been studied by temperature-dependent 57Fe-Mossbauer spectroscopy. The relevant Mossbauer parameters have been determined and are compared with the data obtained for the model compound octamethylferrocene (OMF). The data obtained by 57Fe-Mossbauer spectroscopy reflect a small decrease of s-electron d. from the ferrocene moiety to the conjugated backbone, as is demonstrated by the smaller isomeric shift of the monomers I-III in comparison with the corresponding polymers IV-VI. As may be deduced from the temperature dependence of the recoil-free fraction and the calculated lattice temps., the polymers are much 'softer' (within the definitions of Mossbauer spectroscopy) than the corresponding monomers. Finally, an unusual phase transition has been observed in OMF some 80°C below the m.p., which appears to lead to a large, sudden, and unexpected increase in the mean-square-amplitude of vibration of the metal atom in Me substituted ring systems. This anomalous T-dependence of the recoil-free fraction, which is associated with the presence of the ring Me groups, is not observed when one (or more) of the ring protons is replaced by a sterically bulky side chain, as in I-III.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:862005 CAPLUS  
DN 134:147687  
TI Synthesis of a Vinylene-Bridged Ferrocene-Hydroquinone Complex and Its Unusual Structural Change Originated by Proton-Coupled Electron Transfer  
AU Kurihara, Masato; Sano, Hiroki; Murata, Masaki; Nishihara, Hiroshi  
CS Department of Chemistry School of Science, The University of Tokyo, Bunkyo-ku Tokyo, 113-0033, Japan  
SO Inorganic Chemistry (2001), 40(1), 4-5  
CODEN: INOCAJ; ISSN: 0020-1669  
PB American Chemical Society  
DT Journal  
LA English

OS CASREACT 134:147687  
GI



I

AB Wittig coupling reaction of  $\text{FcCH}_2\text{P}+\text{Ph}_3\text{Br}-$  with 2,5-ditosylbenzaldehyde, followed by deprotection of the tosyl group and isolation by TLC gave 16% title complex, trans- $\text{FcCH:CHC}_6\text{H}_3(\text{OH})_{2-2,5}$  1. Treating 1 with 2 equiv  $[\text{Fe}(\eta^5\text{-C}_5\text{H}_4\text{Cl})_2]+\text{PF}_6^-$  in MeOH-MeCN gave 76%  $\text{FcCH:C:C}[\text{COCH:CHC}(\text{OH}): \text{CH}]$  3 (shown as I), which has both an allene and a quinonoid structure, by 2-electron oxidation and 2-proton elimination. Protonation of diamagnetic 3 with  $\text{CF}_3\text{SO}_3\text{H}$  afforded a paramagnetic semiquinone-ferrocenium species observable by ESR and UV-Vis-near-IR spectra.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:498555 CAPLUS

DN 133:224234

TI Near infrared dyes by combination of squaraine and ferrocene chromophores  
AU Meier, H.; Petermann, R.

CS Institute of Organic Chemistry, University of Mainz, Mainz, D-55099, Germany

SO Tetrahedron Letters (2000), 41(29), 5475-5478  
CODEN: TELEAY; ISSN: 0040-4039

PB Elsevier Science Ltd.

DT Journal

LA English

AB Squaraines represent a class of compds. which attracts much attention in materials science. A synthetic sequence for the preparation of sym. squaraines which contain ferrocene units as electron donors is described. The compds. exhibit, in dichloromethane or chloroform, two intense absorption bands. One of them is located at 641/650 nm - a normal region for squaraines; however, the other band is strongly shifted to long wavelengths and has its maximum at 921/961 nm. Dodecyl and 2-ethylhexyl side chains enhance the solubility of these compds., which represent a new type of NIR dyes.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:376076 CAPLUS

DN 133:150632

TI Synthesis and solvatochromism of some dipolar aryl-phosphonium and -phosphine oxide systems

AU Allen, D. W.; Mifflin, J. P.; Skabara, P. J.

CS Division of Chemistry, Sheffield Hallam University, Sheffield, S1 1WB, UK

SO Journal of Organometallic Chemistry (2000), 601(2), 293-298  
CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier Science S.A.

DT Journal

LA English

AB The synthesis is reported of dipolar arylphosphonium salts bearing ferrocenylethenyl, 2-thienylethenyl, 4-dimethylaminophenylethenyl, or (4-dimethylaminophenyl)butadienyl electron-donor centers, together with a study of their course of alkaline hydrolysis, which provides a convenient synthetic route to related dipolar phosphine oxides. The phosphonium salts exhibit a modest degree of neg. solvatochromism, whereas the related phosphine oxides show a small pos. solvatochromic effect. In the case of the ferrocenyl systems, the electronic effects of the P acceptor group on the ferrocene unit were studied by cyclic voltammetry.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:757538 CAPLUS

DN 132:165748

TI Access to Well-Defined Heterogeneous Catalytic Systems via Ring-Opening Metathesis Polymerization (ROMP): Applications in Palladium(II)-Mediated Coupling Reactions

AU Buchmeiser, Michael R.; Wurst, K.

CS Institute of Analytical Chemistry and Radiochemistry and the Institute of General Inorganic and Theoretical Chemistry, University of Innsbruck, Innsbruck, A-6020, Austria

SO Journal of the American Chemical Society (1999), 121(48), 11101-11107

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

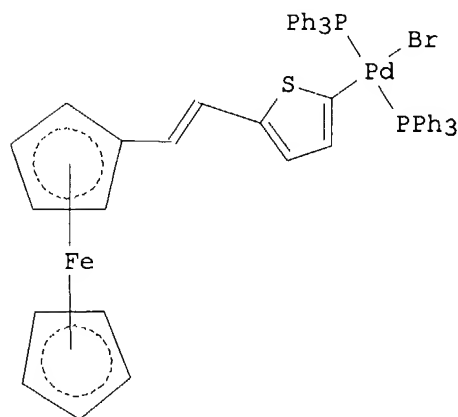
OS CASREACT 132:165748

AB The preparation of a new heterogeneous palladium(II)-based catalyst and its homogeneous analog and their use for Heck-type, alkyne and amine couplings are described. The heterogeneous catalytic system is based on a polymer-bound dichloropalladium di(2-pyridyl)amide and was prepared via ring-opening metathesis copolymn. of 2-norbornene-5-[N,N-di(2-pyridyl)]carbamide with 1,4,4a,5,8,8a-hexahydro-1,4,5,8-exo-endo-dimethanonaphthalene and subsequent loading of the resulting resin with palladium(II) chloride. Target catalyst was a palladium complex of endo-N,N-Di-2-pyridinylbicyclo[2.2.1]hept-5-ene-2-carboxamide polymer with (1 $\alpha$ ,4 $\alpha$ ,4a $\alpha$ ,5 $\beta$ ,8 $\beta$ ,8a $\alpha$ )-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene. The heterogeneous catalyst is air, moisture, and temperature stable up to 150 °C and highly active (94-99% yields) in the vinylation of aryl iodides and aryl bromides (Heck-type couplings) with turn-over nos. (TONs) of up to 210000. Even higher TONs (up to 350000) may be achieved in the arylation of alkynes. High yields ( $\leq$ 95%) and TONs ( $\leq$ 24000) may addnl. be achieved in the tetrabutylammonium bromide (TBAB) assisted vinylation of aryl chlorides. Moderate yields (<65%) and TONs (<4000) are observed in the amination of aryl bromides. A soluble analog of the heterogeneous system, N,N-di(2-pyridyl)acetamide palladium dichloride (2), was prepared from palladium(II) chloride and N,N-di(2-pyridyl)acetamide and its chloride was characterized by X-ray anal. It crystallizes in the monoclinic space group P21/n, a = 835.0(1) pm, b = 1494.3(4) pm, c = 1199.3(2) pm,  $\alpha$  = 90°,  $\beta$  = 109.05(2)°,  $\gamma$  = 90°, Z = 4. It served as a model compound for the elucidation of the actual geometry of the catalytic species. The un-strained geometry of the chloride with almost ideal angles and bond lengths explains the high stability of the catalytic center. The significantly higher catalytic activity of the heterogeneous

system compared to the homogeneous one suggests well-defined ligand-bound catalytic sites rather than polymer-supported palladium colloids.

RE.CNT 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:712697 CAPLUS  
DN 132:64385  
TI Ferrocene End-Capped Palladium(II) and Platinum(II) Complexes with Thiophene Spacers  
AU Thomas, K. R. Justin; Lin, Jiann T.; Lin, Kuan-Jiuh  
CS Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan  
SO Organometallics (1999), 18(25), 5285-5291  
CODEN: ORGND7; ISSN: 0276-7333  
PB American Chemical Society  
DT Journal  
LA English  
GI



I

AB Heterobimetallics containing ferrocene and Pd(II) or Pt(II), e.g., I, were synthesized by oxidative addition of ferrocene-substituted halothiophenes with zerovalent Pd or Pt precursors. The stable solids were thoroughly characterized by elemental anal., NMR, UV-visible spectroscopy, and cyclic voltammetry. The rich redox chemical of the complexes depends on the conjugation length that separates the two metal sites. The crystal structure of a Pt  $\sigma$ -thienyl complex I was determined

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:569674 CAPLUS  
DN 131:286598  
TI Tricarbonyl( $\eta^6$ -arene)chromium and ferrocene complexes linked with aromatic spacers  
AU Plyta, Zoi F.; Prim, Damien; Tranchier, Jean-Philippe; Rose-Munch, Françoise; Rose, Eric  
CS Laboratoire de Synthèse Organique et Organometallique, UMR CNRS 7611, Paris, 75252, Fr.  
SO Tetrahedron Letters (1999), 40(37), 6769-6771  
CODEN: TELEAY; ISSN: 0040-4039  
PB Elsevier Science Ltd.

DT Journal  
 LA English  
 AB The syntheses of alkenyl arenic bridged dinuclear complexes, trans-( $\eta^6$ -C<sub>6</sub>H<sub>5</sub>(HC:CHFc))Cr(CO)<sub>3</sub> and trans-( $\eta^6$ -C<sub>6</sub>H<sub>5</sub>(HC:CH(RFc)))Cr(CO)<sub>3</sub> (R = 1,4-C<sub>6</sub>H<sub>4</sub>, 1,3-C<sub>6</sub>H<sub>4</sub>, 2,5-C<sub>4</sub>H<sub>2</sub>S) were performed by reacting aromatic ferrocenyl-substituted aldehydes with tricarbonylchromium-complexed benzylphosphonate.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:297641 CAPLUS  
 DN 131:102368  
 TI Hydrocarbon bridged metal complexes XLV. Dinuclear polyene-bridged Fischer carbene complexes and a star-shaped benzene-bridged tris(ferrocenyl-decapentaenyl) compound  
 AU Briel, Oliver; Fehn, Armin; Beck, Wolfgang  
 CS Institut für Anorganische Chemie, Ludwig-Maximilians-Universität München, Munich, D-80333, Germany  
 SO Journal of Organometallic Chemistry (1999), 578(1-2), 247-251  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB Condensation of carotenoid polyene dialdehydes, 1,1'-ferrocene dialdehydes and of 9-ferrocenyl-2,7-dimethylnonatetraenal with the Fischer carbene complexes (OC)5W:C(NMe<sub>2</sub>)CH<sub>2</sub>SiMe<sub>3</sub> or (OC)5M:C(Me)(OMe) (M = Cr, W) in the presence of BuLi or SiMe<sub>3</sub>Cl/NEt<sub>3</sub> yields the bis(carbene) complexes 1-4 and the donor acceptor substituted complexes 5, 6. The star-shaped trinuclear mols. 7 and 8 were obtained under Wittig conditions from 1,3,5-tris[(triphenylphosphonio)methyl]benzene tribromide and ferrocene aldehyde or 9-ferrocenyl-2,7-dimethyl-nonatetraenal.

RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 21 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:297625 CAPLUS  
 DN 131:73743  
 TI Redox active alkenyl-bridged bi- and trinuclear arene-Cr(CO)<sub>3</sub>-complexes by Horner-Emmons-Wadsworth olefinations  
 AU Müller, Thomas J. J.  
 CS Institut für Organische Chemie, Ludwig-Maximilians-Universität München, Munich, D-80333, Germany  
 SO Journal of Organometallic Chemistry (1999), 578(1-2), 95-102  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 OS CASREACT 131:73743  
 AB Alkenyl-bridged arene-Cr(CO)<sub>3</sub>-complexes are readily synthesized in good yields by Horner-Emmons-Wadsworth (HEW) olefinations from Cr(CO)<sub>3</sub>-complexed benzylphosphonates and organometallic aldehydes. The resulting bi- and trinuclear homo- and heterometallic complexes display a strong electronic coupling between the metal fragments as shown by a strong correlation of the CO resonances in the C NMR spectra and the chromium carbonyl metal-ligand charge transfer (MLCT) bands in the UV/visible spectra. Also, the electrochem. of the oligonuclear complexes was studied by cyclic voltammetry.

RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 22 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:41094 CAPLUS  
 DN 130:182569  
 TI Synthesis and Structure of Titanocene Complexes with  $\eta^2$ -Coordinated Internal Ferrocenylacetylenes  
 AU Stepnicka, Petr; Gyepes, Robert; Cisarova, Ivana; Varga, Vojtech; Polasek, Miroslav; Horacek, Michal; Mach, Karel  
 CS Department of Inorganic Chemistry, Charles University, Prague, 128 40, Czech Rep.  
 SO Organometallics (1999), 18(4), 627-633  
 CODEN: ORGND7; ISSN: 0276-7333  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The reduction of  $(\eta^5\text{-C}_5\text{H}_5\text{-nMen})_2\text{TiCl}_2$  ( $n = 0, 4$ , and  $5$ ) complexes by Mg metal in THF and in the presence of [(trimethylsilyl)ethynyl]ferrocene (2) or [(phenyl)ethynyl]ferrocene (3) affords the  $(\eta^5\text{-C}_5\text{H}_5\text{-nMen})_2\text{Ti}(\eta^2\text{-FcC.tplbond.CR})$  complexes [ $\text{Fc} = (\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\eta^5\text{-C}_5\text{H}_4)$ ,  $\text{R} = \text{SiMe}_3$  (4-6) and  $\text{Ph}$  (7-9)]. Crystal structures of 5 and 9 show a titanacyclopropene-like mode of coordination of the acetylenes 2 and 3. Bonding of the acetylenes to the titanocene unit results in a remarkable downfield shift of  $^{13}\text{C}$  NMR resonances of the acetylenic C atoms and in a large red shift of the  $\nu(\text{C.tplbond.C})$  wavenumbers. Testing the complexes 6 and 9 toward head-to-tail dimerization of  $\text{HC.tplbond.CSiMe}_3$  showed that compound 9 induces dimerization to give exclusively 2,4-bis(trimethylsilyl)but-1-en-3-yne (10), whereas complex 6 is inactive.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 23 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:655446 CAPLUS  
 DN 130:52535  
 TI Synthesis of manganese tricarbonyl cationic complexes of ferrocenyl substituted arenes via a manganese tricarbonyl cation transfer reaction  
 AU Kim, Jung Eun; Son, Seung Uk; Lee, Su Seong; Chung, Young Keun  
 CS Dep. Chem. and Cent. Molecular Catalysis, Coll. Natural Sci., Seoul Natl. Univ., Seoul, 151-742, S. Korea  
 SO Inorganica Chimica Acta (1998), 281(2), 229-234  
 CODEN: ICHAA3; ISSN: 0020-1693  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 OS CASREACT 130:52535  
 AB Mn tricarbonyl cations of ferrocenyl substituted arenes were synthesized by the reaction of  $[(\text{naphthalene})\text{Mn}(\text{CO})_3]\text{BF}_4$  with the corresponding arenes in  $\text{CH}_2\text{Cl}_2$ . When the arenes are phenylferrocene, (4-methylphenyl)ferrocene, (2,6-dimethylphenyl)ferrocene, (2,4,6-trimethylphenyl)ferrocene, (trans-4-methylstyryl)ferrocene, or (trans-2,4,6-trimethylstyryl)ferrocene, the diiron compds.  $[(\text{Fc-arene})\text{FeCp}]^+$  and  $[(\text{Fc-arene})\text{Fe}(\text{C}_5\text{H}_4\text{-arene})]^+$  were obtained as side-products. One of the diiron compds. was characterized by x-ray crystallog.

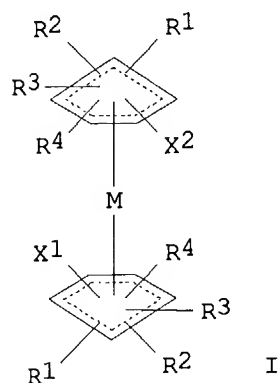
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 24 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:495845 CAPLUS  
 DN 129:216723  
 TI Synthesis and characterization of new ferrocenyl heterobimetallic compounds with high NLO responses  
 AU Mata, Jose; Uriel, Santiago; Peris, Eduardo; Llusar, Rosa; Houbrechts, Stephan; Persoons, Andre  
 CS Departamento de Quimica Inorganica y Organica, Universitat Jaume I,

Castellon, E-12080, Spain  
 SO Journal of Organometallic Chemistry (1998), 562(2), 197-202  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 AB Several ferrocenyl based heterobimetallic compds.  
 (CpFeC5H4(CH:CH)nPh(Cr(CO)3) (n = 1, 2); (4-(CpFeC5H4CH:CH)C6H4CN)M(CO)5  
 (M = Cr, W); (4-(CpFeC5H4CH:CH)pyridine)M(CO)5 (M = Cr, Mo, W)) were  
 obtained and characterized, and their NLO responses were measured. The  
 observed hyperpolarizability ( $\beta$ ) values are among the highest of the  
 organometallic based materials reported up to date. The heterobimetallic  
 compds. were also studied by cyclic voltammetry.  
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 25 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:298230 CAPLUS  
 DN 129:34423  
 TI Electrophotographic photoreceptors using novel metallocene derivative  
 IN Mitsumori, Mitsuyuki  
 PA Mitsubishi Chemical Industries Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10123733	A2	19980515	JP 1996-280728	19961023 <--
PRAI	JP 1996-280728		19961023		
OS	MARPAT 129:34423				
GI					



AB The title photoreceptors have, on a conductive support, a photoreceptor  
 containing a metallocene derivative I [R1, R2, R3, R4 = H, halo, alkyl, alkoxy,  
 silyl, phosphino, aryl, heterocyclyl; M = metal atom; X1, X2 = H,  
 (CR5:CR6)iCR7:CR8R9 [i = 0-4; R5-9 = H, alkyl, alkoxy, CN, aryl,  
 heterocycle, the pair of R8 and R9 may condense to form a carbon ring or  
 heterocycle; when 1 of R8 and R9 is H or an alkyl, then the other is aryl  
 or heterocyclyl]; X1 = X2  $\neq$  H]. The photoreceptors show high  
 photosensitivity and durability in repeated use.

L7 ANSWER 26 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:690372 CAPLUS

DN 127:346496  
 TI Facile route to ferrocifen, 1-[4-(2-dimethylaminoethoxy)phenyl]-1-phenyl-2-ferrocenyl-but-1-ene, first organometallic analog of tamoxifen, by the McMurry reaction  
 AU Top, Siden; Dauer, Benedicte; Vaissermann, Jacqueline; Jaouen, Gerard  
 CS Lab. Chimie Organometallique, Ecole Natl. Supérieure Chimie Paris, URA CNRS, Paris, 75231, Fr.  
 SO Journal of Organometallic Chemistry (1997), 541(1-2), 355-361  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier  
 DT Journal  
 LA English  
 OS CASREACT 127:346496  
 AB As part of the search for tamoxifen substitutes that could be useful in the treatment of breast cancer, the use of organometallic complexes was studied. For this purpose a synthesis was developed for ferrocifen, the prototype of this new series of complexes. Low valent Ti-mediated (TiCl<sub>4</sub>/Zn) cross-coupling of 4-MeOC<sub>6</sub>H<sub>4</sub>COPh with ferrocenyl Et ketone affords the corresponding but-1-ene in high yield (66%), from which ferrocifen, an E/Z mixture of FcCEt:CPh(C<sub>6</sub>H<sub>4</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>-4), is rapidly prepared in an overall yield of 41% from ferrocene.  
 RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 27 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:479868 CAPLUS  
 DN 127:176536  
 TI Synthesis and crystal structure of (E)-[1-ferrocenyl-2-(4-chlorophenyl)ethylene]  
 AU Qian, Ying; Sun, Yue-Ming; Liu, Ju-Zheng; Chen, Jian; Hu, Chun-Hua; Zheng, Pei-Ju  
 CS Dep. of Chemistry, Southeast University, Nanjing, 210018, Peop. Rep. China  
 SO Jiegou Huaxue (1997), 16(4), 315-319  
 CODEN: JHUADF; ISSN: 0254-5861  
 PB "Jiegou Huaxue" Bianji Weiyuanhui  
 DT Journal  
 LA English  
 AB The single crystal structure of the donor-acceptor ferrocenyl derivative C<sub>18</sub>H<sub>15</sub>ClFe (Mr = 322.62) was determined, belonging to orthorhombic crystal system, space group P2<sub>1</sub>2<sub>1</sub>2<sub>1</sub> with a 11.307(2), b 8.471(2), c 15.427(3) Å, Z = 4, dc = 1.45 g cm<sup>-3</sup>, λ(MoKα) = 0.71073 Å, μ = 11.9 cm<sup>-1</sup>, F(000) = 664. The final R value for 1534 observed [I > 3σ(I)] reflections is 0.060. The configuration of the C:C double bond is trans. The C<sub>5</sub>H<sub>4</sub>CH:CHC<sub>6</sub>H<sub>4</sub>Cl fragment is almost planar. The rings of ferrocene are almost in the eclipsed positions with each other.  
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 28 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:383233 CAPLUS  
 DN 127:121839  
 TI Synthesis of ferrocene derivatives with π-extended conjugation  
 AU Rodriguez, Jose-Gonzalo; Gayo, Manuel; Fonseca, Isabel  
 CS Departamento de Química Organica, C1, Facultad de Ciencias, Universidad Autonoma, Cantoblanco, 28049, Madrid, Spain  
 SO Journal of Organometallic Chemistry (1997), 534(1-2), 35-42  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier  
 DT Journal  
 LA English  
 AB Synthesis of (E)-1-ferrocenyl-2-(p-iodophenyl)ethene was carried out by the Wittig reaction between (p-iodobenzyl)triphenylphosphonium ylide and



ferrocene carboxaldehyde, obtained as a mixture of E/Z isomers. Z→E isomerization was induced by iodine-NBS in quant. yield. The x-ray mol. structure of this (E)-isomer indicates that the mols. are linked by charge transfer complexation between the iodine atom and the cyclopentadiene ring. The conjugation of the mol. of 1-ferrocenyl-2-(p-iodophenyl)ethene was expanded to the (Z,Z)- and (E,E)-FcCH:CHC6H4C6H4CH:CHFc 4,4'-biphenyl derivs. and to the (Z,Z)- and (E,E)-FcCH:CHC6H4C.tplbond.CC.tplbond.CC6H4CH:CHFc systems (preps. given), both as centrosym. structures.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 29 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:101344 CAPLUS

DN 126:199646

TI Facile synthesis of novel bis- and tetrakis(2-ferrocenylvinyl)[2.2]paracyclophanes by palladium-catalyzed coupling reactions

AU Kay, Kwang Yol; Baek, Yong Gu; Han, Dae Won; Yeu, Sang Yong

CS Dep. Chem., Ajou Univ., Suwon, 442749, S. Korea

SO Synthesis (1997), (1), 35-37

CODEN: SYNTBF; ISSN: 0039-7881

PB Thieme

DT Journal

LA English

OS CASREACT 126:199646

AB Mono-, bis-, and tetrakis(2-ferrocenylvinyl)[2.2]paracyclophanes were synthesized in 52, 24, and 17% yields, resp., by Pd-catalyzed Heck reactions of vinylferrocene with mono-, bis-, and tetrakis(bromo-substituted) [2.2]paracyclophanes.

L7 ANSWER 30 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:72505 CAPLUS

DN 126:157593

TI Synthesis of ferrocenyl(aryl)ethylenes and their cyclodextrin complexes as potential materials for nonlinear optics

AU Sokolov, V. I.; Bulygina, L. A.

CS Inst. Elementoorg. Soedin., RAN, Moscow, 117813, Russia

SO Izvestiya Akademii Nauk, Seriya Khimicheskaya (1996), (9), 2361-2363

CODEN: IASKEA

PB Institut Organicheskoi Khimii im. N. D. Zelinskogo Rossiiskoi Akademii Nauk

DT Journal

LA Russian

AB Cis and trans isomers of 1-ferrocenyl-2-(2-(4-nitrophenyl)ethylenes were prepared and separated, and their complexes (as isomeric mixts.) with  $\beta$ -cyclodextrin were prepared for the study of nonlinear optical properties (no data).

L7 ANSWER 31 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:360115 CAPLUS

DN 125:115355

TI Synthesis of ferrocene-based redox-active polymers via palladium-catalyzed coupling reactions

AU Bochmann, Manfred; Lu, Jianjun; Cannon, Roderick D.

CS School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ, UK

SO Journal of Organometallic Chemistry (1996), 518(1-2), 97-103

CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier

DT Journal

LA English

AB 1,1'-Difunctionalized ferrocenes  $\text{Fe}(\text{C}_5\text{H}_4\text{Z})_2$  [ $\text{Z} = 4\text{-BrC}_6\text{H}_4$ ,  $4\text{-BrC}_6\text{H}_4\text{CH}_2\text{C}(\text{O})\text{-}$ ,  $4\text{-BrC}_6\text{H}_4\text{CH}:\text{CH}\text{-}$ ] undergo cross-coupling reactions with the dizinc reagent  $(\text{ClZnC}_6\text{H}_4)_2\text{COCH}_2\text{CHC}(\text{Me})\text{O}$  to give a series of conjugated and non-conjugated aromatic poly(ferrocenes) with ferrocenediyl moieties as part of the polymer backbone. Similar products are obtained by Heck-arylation of 1,1'-divinylferrocene with diiodoarenes I-R-I ( $\text{R} = 1,4\text{-C}_6\text{H}_4$ ,  $1,1'\text{-C}_6\text{H}_4\text{-C}_6\text{H}_4$ ,  $2,5\text{-C}_4\text{H}_2\text{S}$ ,  $1,1'\text{-C}_6\text{H}_4\text{OC}_6\text{H}_4$ ). The coupling products form orange to deep red solids, which are poorly soluble and oligomeric in most cases. Cyclic voltammetry measurements in dichloromethane solution give redox potentials close to the parent ferrocenes, with apparently very little interaction between the widely spaced iron centers.

L7 ANSWER 32 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1995:178227 CAPLUS  
 DN 123:56514  
 TI A Versatile Tandem Catalysis Procedure for the Preparation of Novel Amino Acids and Peptides  
 AU Burk, Mark J.; Lee, Jeffrey R.; Martinez, Jose P.  
 CS Department of Chemistry, Duke University, Durham, NC, 27706, USA  
 SO Journal of the American Chemical Society (1994), 116(23), 10847-8  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 AB A new and efficient tandem catalysis procedure has been developed for the preparation of a wide range of novel  $\alpha$ -amino acid derivs. and peptides. This method utilizes the author's 1,2-bis(2-5,diethylphospholan-1-yl)benzene (Et-DuPHOS)-Rh or Pr-DuPHOS-Rh-catalyzed  $\alpha$ -enamide hydrogenation reactions to produce specific functionalized  $\alpha$ -amino acids which can serve as common intermediates in Pd-catalyzed cross-coupling reactions. For example, bromophenylalanine derivs.  $\text{Ac-D-NHCH}(\text{CH}_2\text{C}_6\text{H}_4\text{R})\text{CO}_2\text{Me}$  ( $\text{R} = 2\text{-Br}$ ,  $3\text{-Br}$ ,  $4\text{-Br}$ ) were prepared and employed in Pd-catalyzed cross-coupling reactions with a variety of boronic acid derivs. The true advantage of the method is revealed through the preparation of novel ring-substituted arylalanine derivs. Finally, bromophenylalanines were incorporated into di- and tripeptides, and the rapid construction of arrays of analogous peptides via cross-coupling reactions were demonstrated. These results potentially form the basis of a powerful new strategy for conducting detailed structure-activity relationship studies.

L7 ANSWER 33 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1994:701033 CAPLUS  
 DN 121:301033  
 TI Palladium-catalyzed coupling of vinylferrocene with aromatic halides - a highly efficient route to (ferrocenylvinyl)arenes  
 AU Koenig, Burkhard; Zieg, Harald; Bubenitschek, Peter; Jones, Peter G.  
 CS Inst. Organische Chemie, Technischen Univ. Braunschweig, Braunschweig, 38106, Germany  
 SO Chemische Berichte (1994), 127(9), 1811-13  
 CODEN: CHBEAM; ISSN: 0009-2940  
 DT Journal  
 LA English  
 OS CASREACT 121:301033  
 GI

AB (Ferrocenylvinyl)arenes, e.g. I, II, and III are obtained from vinylferrocene and substituted aromatic and heteroarom. halides by palladium-catalyzed Heck-type reactions. Up to three ferrocene units are introduced in one step by the multifold reaction of 1,2-dibromo- or 1,3,5-tribromobenzene with vinylferrocene. The first crystal structure of a bis(ferrocenylvinyl)benzene chromophore II is reported.

L7 ANSWER 34 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:299439 CAPLUS

DN 120:299439

TI Organometallic Nonlinear Optical Polymers. 4. Organometallic Main-Chain, Side-Chain, and Guest-Host Polymers: A Study of Their Orientation and Relaxation Using Second Harmonic Generation

AU Wright, Michael E.; Toplikar, Edward G.; Lackritz, Hilary S.; Kerney, John T.

CS Department of Chemistry and Biochemistry, Utah State University, Logan, UT, 84322-0300, USA

SO Macromolecules (1994), 27(11), 3016-22

CODEN: MAMOBX; ISSN: 0024-9297

DT Journal

LA English

AB Several new organometallic polymers were prepared and structure-property relationships for local polymer mobility and the net orientation of the organometallic nonlinear optical (NLO)-phores were investigated using second harmonic generation (SHG). The methacrylate organometallic derivs.  $\{\eta^5\text{-C}_5\text{H}_4\text{CH}_2\text{O}_2\text{CC}(\text{CH}_3):\text{CH}_2\}\text{Fe}\{\eta^5\text{-C}_5\text{H}_4\text{CH}:\text{C}(\text{CN})\text{X}\}$  [X = p-C<sub>6</sub>H<sub>5</sub>Br, 4-pyridyl, CN, CO<sub>2</sub>Et] and  $\{\eta^5\text{-C}_5\text{H}_4\text{CH}:\text{C}(\text{CN})\text{CO}_2(\text{CH}_2)_2\text{O}_2\text{CC}(\text{CH}_3):\text{CH}_2\}\text{Fe}\{\eta^5\text{-C}_5\text{H}_5\}$  were prepared and polymerized with Me methacrylate (5/95, mol/mol) to give copolymers. Comonomer  $\{\eta^5\text{-C}_5\text{H}_4\text{CH}:\text{C}(\text{CN})\text{CO}_2(\text{CH}_2)_2\text{OH}\}\text{Fe}\{\eta^5\text{-C}_5\text{H}_4\text{CH}_2\text{OH}\}$  (I) was synthesized and reacted with 1,6-diisocyanatohexane to yield a main-chain NLO organometallic polyurethane (M<sub>n</sub> = 7600, T<sub>m</sub> = 176°). In addition, a poly(Me methacrylate) guest-host film of NLO-phore I was prepared. Corona poling and SHG measurements were made under a variety of carefully controlled exptl. conditions. In the case of the covalently bound ferrocenyl NLO-phore, temporal stability was greatest for the smaller acceptor group CH:C(CN)<sub>2</sub>. Phys. aging the organometallic polymers prior to poling produced samples which displayed a smaller initial SHG signal; however, the signal was significantly more stable for a longer time. The guest-host system using NLO-phore I, with its multiple H-bonding sites, was observed to have very good long-term temporal stability. The guest-host polymer was poled neg. and showed enhanced temporal stability in comparison to a pos. poled sample. The organometallic main-chain copolymer responded well to poling but had concomitant decomposition, leading to an underestn. of orientational stability.

L7 ANSWER 35 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:218592 CAPLUS

DN 120:218592

TI Organometallic NLO polymers. Linear main-chain NLO polymers of ferrocene

AU Wright, Michael E.; Toplikar, Edward G.

CS Dep. Chem. Biochem., Utah State Univ., Logan, UT, 84322-0300, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1992), 33(1), 1125-6

CODEN: ACPPAY; ISSN: 0032-3934

DT Journal

LA English

AB Six ferrocene monomers containing substituted vinyl group, EtO<sub>2</sub>C(NC)C=CH and HO(CH<sub>2</sub>)<sub>6</sub>O groups, or NCCH<sub>2</sub>CO<sub>2</sub>(CH<sub>2</sub>)<sub>6</sub>O and CHO groups were prepared. Single-crystal mol. structure of monomers containing substituted vinyl group was determined and the monomer containing NCCH<sub>2</sub>CO<sub>2</sub>(CH<sub>2</sub>)<sub>6</sub>O and CHO groups was homopolymd. via intramol. Knoevenagel condensation to give an unsatd.

polyether-polyester containing ferrocene moieties in the main chain and CN pendant groups. The homopolymer is useful as a nonlinear optical material.

L7 ANSWER 36 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:193051 CAPLUS

DN 120:193051

TI Organometallic nonlinear optical (NLO) polymers. Further development of pendant ferrocene poly(methyl methacrylate) copolymers

AU Wright, Michael E.; Toplikar, Edward G.

CS Dep. Chem. Biochem., Utah State Univ., Logan, UT, 84322-0300, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1993), 34(1), 542-3

CODEN: ACPPAY; ISSN: 0032-3934

DT Journal

LA English

AB Pendant ferrocene-Me methacrylate copolymers were prepared by polymerization of Me

methacrylate with vinyl ferrocene compds. The polymers can be used as NLO materials.

L7 ANSWER 37 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:472786 CAPLUS

DN 119:72786

TI Intramolecular carbo- and heterocyclization induced by systematic demetalation of ( $\eta^3$ -butadienyl)palladium complexes

AU Pfeffer, Michel; Sutter, Jean Pascal; DeCian, Andre; Fischer, Jean

CS Lab. Synth. Met.-Induites, Univ. Louis Pasteur, Strasbourg, F-67070, Fr.

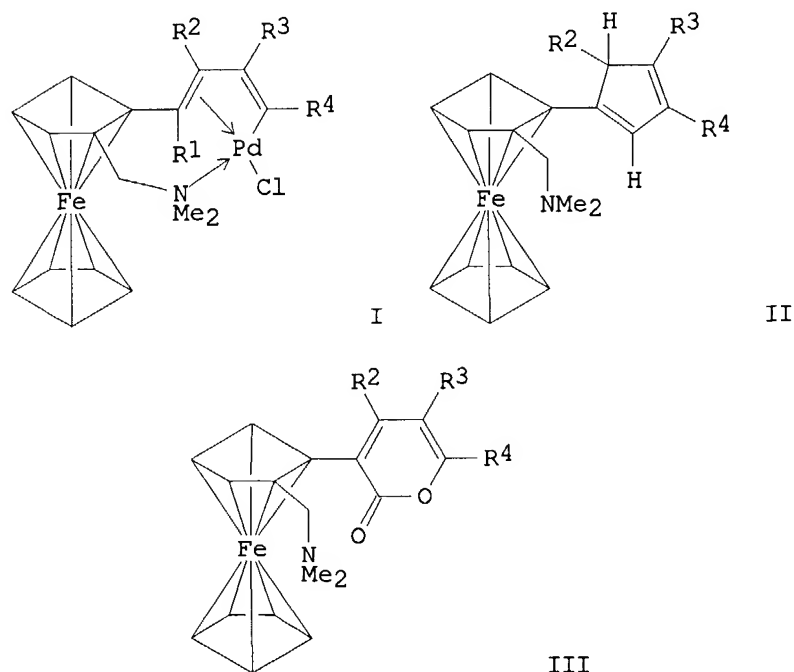
SO Organometallics (1993), 12(4), 1167-73

CODEN: ORGND7; ISSN: 0276-7333

DT Journal

LA English

GI



AB Organopalladium complexes, e.g., I, obtained via the insertion of two internal alkynes into the Pd-C bond of cyclopalladated compds. were demetalated in the presence of PPh<sub>3</sub> in methanol. The type of the resulting organic product depends only upon the nature of the various substituents of the butadienyl fragment  $\eta^3$ -bound to Pd in the starting materials. Examples, II and III, of what could be achieved are given.

L7 ANSWER 38 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:102177 CAPLUS

DN 118:102177

TI High resolution EPR spectra of ferrocenyl(nitrophenyl)ethylene anion-radicals

AU Pedulli, Gian Franco; Todres, Zori V.

CS Dip. di Chim. Org., Univ. degli Stud. di Bologna, Bologna, Italy

SO Journal of Organometallic Chemistry (1992), 439(2), C46-C48

CODEN: JORCAI; ISSN: 0022-328X

DT Journal

LA English

AB The radical anions of the title compds., FcCH:CHC<sub>6</sub>H<sub>4</sub>R (Fc = ferrocenyl, R = 2-, 3-, and 4-NO<sub>2</sub>), were generated in DMSO by treatment of the appropriate precursors with Me<sub>3</sub>COK, and their high resolution EPR spectra were recorded. The spectroscopic parameters indicate that the unpaired electron is delocalized on the ferrocenyl cyclopentadienyl ring and to some extent on the iron atom in the ortho and para but not in the meta nitrophenyl derivs.

L7 ANSWER 39 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:81115 CAPLUS

DN 118:81115

TI The Wittig reaction in the generation of organometallic compounds containing alkenes as side groups

AU Miller, Edward J.; Weigelt, Carolyn A.; Serth, Judith A.; Rusyid, Rusydi; Brenner, Jeffery; Luck, Linda A.; Godlewski, Michael

CS Dep. Chem., State Univ. New York at Plattsburgh, Plattsburgh, NY, 12901, USA

SO Journal of Organometallic Chemistry (1992), 440(1-2), 91-101

CODEN: JORCAI; ISSN: 0022-328X

DT Journal

LA English

OS CASREACT 118:81115

AB The Wittig reaction was identified as a viable route to transition metal monomers. It was used to synthesize [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CMe:CHR)]Mn(CO)<sub>3</sub> [R = H (68% yield), Me (60%), Et (51%), Pr (40%), Ph (46%)] from acetylcymantrene and the appropriate phosphorane at room temperature [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CMe:CHR)]Fe( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>) [R = H (81%), Me (77%), Et (36%), Pr (27%)] were prepared from acetylferrocene and phosphorane at room temperature [ $\eta^5$ -C<sub>5</sub>(CH:CH(R'))H<sub>4</sub>]Fe( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>) [R,R' = H,H (79%); Me,H (69%); Et,H (48%); Pr,H (49%); Ph,H (80%); CHMe<sub>2</sub>,H (73%); Me,Me (67%)] were produced from formylferrocene and phosphorane in refluxing benzene. E/Z Isomeric ratios were identified for alkenylcymantrenes and are consistent with past Wittig studies. The aldol reaction was identified as a side route in the Wittig reactions of acetylferrocene and phosphoranes. Carbomethoxyphosphoranes did not produce alkenes at room temperature with nonpolar solvents.

L7 ANSWER 40 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:59854 CAPLUS

DN 118:59854

TI Protophilic isotopic hydrogen exchange of 1-ferrocenyl-2-(nitrophenyl)ethylenes

AU Todres, Z. V.; Ermekov, D. S.

CS Inst. Organo-Elem. Compd. of the Russ. Acad. Sci., 28 Vavilov Str.,  
Moscow, 117813 GSP-1, V-334, Russia

SO Journal of Organometallic Chemistry (1992), 439(1), C28-30  
CODEN: JORCAI; ISSN: 0022-328X

DT Journal

LA English

AB cis-1-Ferrocenyl-2-(4-nitrophenyl)ethylene enters into the  
protium/deuterium exchange in basic medium at the expense of hydrogens of  
the Ph ring, at ortho positions with respect of the nitro group. The  
homoarom. analog, 4-nitrostilbene, under the same conditions, undergoes  
isotopic exchange occurring exclusively at the vinylic CH fragment  
attached to the nitrophenyl group. The difference is eliminated as a  
result of the shift of the nitro group from position 4 into position 2 of  
the Ph ring: cis-1-ferrocenyl-2-(2-nitrophenyl)ethylene enters into H+/D+  
exchange in the same manner as 4-nitrostilbene.

L7 ANSWER 41 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:592483 CAPLUS

DN 117:192483

TI Organometallic nonlinear optical polymers. 2. Synthesis of main-chain  
organometallic polymers and a structural study of ferrocene NLO-phores

AU Wright, Michael E.; Toplikar, Edward G.

CS Dep. Chem. Biochem., Utah State Univ., Logan, UT, 84322-0300, USA

SO Macromolecules (1992), 25(22), 6050-4  
CODEN: MAMOBX; ISSN: 0024-9297

DT Journal

LA English

AB A detailed structural anal. of several ferrocene-based nonlinear  
optical-phores was done by x-ray diffraction. Structures were reported  
for  $(\eta^5\text{-C}_5\text{H}_5)(\eta^5\text{-C}_5\text{H}_4\text{CH:C(CN)(R)})\text{Fe}$  (R = CO<sub>2</sub>Et, CN, 4-pyridyl, and  
4-bromophenyl). Electron-withdrawing groups favored and controlled the  
planarity of the  $\pi$ -system. Through selective functionalization of the  
cyclopentadienyl rings of ferrocene, new monomers, namely,  
[ $\eta^5\text{-C}_5\text{H}_4\text{CH}_2\text{O(CH}_2\text{)}_n\text{OH}$ ][ $\eta^5\text{-C}_5\text{H}_4\text{CH:C(CN)CO}_2\text{Et}$ ] $\text{Fe}$  (I) and  
[ $\eta^5\text{-C}_5\text{H}_4\text{CH}_2\text{O(CH}_2\text{)}_n\text{O}_2\text{CCH}_2\text{CN}$ ][ $\eta^5\text{-C}_5\text{H}_4\text{CHO}$ ] $\text{Fe}$  [n = 1 (II); n = 6  
(III)], were prepared. Monomer I was suitable for Lewis acid catalyzed  
transesterification/polymerization using Ti(OBu)<sub>4</sub>, and II and III were  
appropriate for a Knoevenagel polycondensation. The transesterification  
polymerization resulted in formation of an intractable polymeric material of  
unknown structure. The homopolymer of III by the Knoevenagel technique  
afforded the desired polymer, albeit in low mol. weight (.apprx.6800). The  
polymer was characterized by gel-permeation chromatog. and spectroscopic  
data. A major byproduct in the polymerization was the macrocyclic lactone  
produced from an intramol. Knoevenagel condensation. The lactone  
structure was confirmed by single-crystal x-ray diffraction.

L7 ANSWER 42 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:235814 CAPLUS

DN 116:235814

TI Regiochemistry of acetylation of ferrocenylarylethylenes

AU Kott, Kevin L.; McMahon, Robert J.

CS Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA

SO Journal of Organic Chemistry (1992), 57(11), 3097-101  
CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

OS CASREACT 116:235814

AB The synthesis and Friedel-Crafts acetylation of a series of  
ferrocenylarylethylenes,  $\text{C}_5\text{H}_5\text{FeC}_5\text{H}_4\text{CH:CH(C}_6\text{H}_4\text{X-p)}$ , (I, X = NO<sub>2</sub>, BR, NMe<sub>2</sub>)  
are described. Compds. I provide a direct comparison of the reactivity of  
ferrocene, olefin, and aryl functionalities. The regiochem. of  
substitution of these compds. depends on the nature of the aryl

substituent. Acetylation occurs predominantly at the olefin and the unsubstituted cyclopentadienyl ring; substitution does not occur at the aryl ring or at the substituted cyclopentadienyl ring. Reaction at the olefin is accompanied by olefin isomerization. With the strongly activating dimethylamino substituent, substitution at the unsubstituted cyclopentadienyl ring is slightly favored over substitution at the olefin. The regiochem. of olefin substitution suggests that a ferrocenyl substituent is better able to stabilize an adjacent pos. charge than a p-(dimethylamino)aryl substituent. With the bromine substituent, substitution at the olefin is slightly favored over substitution at the unsubstituted cyclopentadienyl ring. The nitro group is sufficiently deactivating that I (X = NO<sub>2</sub>) fails to react under the conditions employed.

L7 ANSWER 43 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:179376 CAPLUS

DN 112:179376

TI Optical nonlinearities of organometallic structures: aryl and vinyl derivatives of ferrocene

AU Ghosal, Saswati; Samoc, Marek; Prasad, Paras N.; Tufariello, Joseph J.

CS Dep. Chem., State Univ. New York, Buffalo, NY, 14214, USA

SO Journal of Physical Chemistry (1990), 94(7), 2847-51

CODEN: JPCHAX; ISSN: 0022-3654

DT Journal

LA English

OS CASREACT 112:179376

AB With an objective to understand the nonlinear optical properties of organometallic structures, various aryl and vinyl derivs. of ferrocene were synthesized and their nonlinear optical properties were investigated by using degenerate four-wave mixing. The mol. second hyperpolarizability  $\gamma$  increases strongly with the length of the conjugated  $\pi$ -electron system. The results show that the effective conjugation is determined predominantly by the length of the aryl-vinyl system; the contribution from the ferrocenyl group is less significant. The d-d resonance of the metal in the ferrocene unit does not appear to make an important contribution to optical nonlinearity. The exptl. results on ferrocene are compared with those from a recent theor. study using semiempirical calcns. Although a qual. agreement with the theor. result is found, the exptl. value of  $\gamma$  determined in this paper is about 4 times larger. Possible sources of such discrepancies are discussed.

L7 ANSWER 44 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:21098 CAPLUS

DN 112:21098

TI Aminoalkylferrocene derivatives. (II). Reactions of palladium complex of N,N-diethylaminomethylferrocene with olefins

AU Zhang, Lun; Xiang, Jinfu; Wang, Shuangli; Wang, Jiying

CS Chem. Dep., Wuhan Univ., Wuhan, Peop. Rep. China

SO Gaodeng Xuexiao Huaxue Xuebao (1988), 9(10), 1074-6

CODEN: KTHPDM; ISSN: 0251-0790

DT Journal

LA Chinese

AB The synthesis of the palladium complex of N,N-diethylaminomethylferrocene, di- $\mu$ -chloro-bis[2-(diethylaminomethyl)ferrocenyl]dipalladium, and its reactions with styrene, Me propenoate, and 2-ferrocenylpropene were reported. The palladium complex and all the reaction products are 1,2-disubstituted ferrocene.

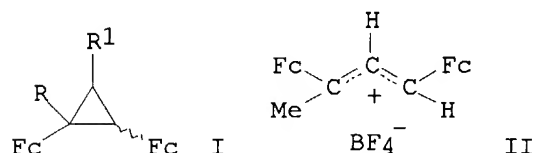
L7 ANSWER 45 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1988:529228 CAPLUS

DN 109:129228

TI Reaction of 1,2-diferrocenylcyclopropanes with trityl tetrafluoroborate

AU Klimova, E. I.; Pushin, A. N.; Sazonova, V. A.  
 CS Mosk. Univ., Moscow, USSR  
 SO Zhurnal Obshchei Khimii (1987), 57(10), 2336-42  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DT Journal  
 LA Russian  
 OS CASREACT 109:129228  
 GI



AB The reaction of cyclopropanes (E)-, (Z)-I (R = H, Me; R1 = H, Me, Ph; Fc = ferrocenyl) with Ph<sub>3</sub>C+BF<sub>4</sub><sup>-</sup> was studied. Thus, treating I (R = Me, R1 = H) with Ph<sub>3</sub>C+BF<sub>4</sub><sup>+</sup> gave salt II. The reactions of the salts with PhNMe<sub>2</sub> and MeMgI were also studied.

L7 ANSWER 46 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:477165 CAPLUS

DN 107:77165

TI Synthesis and electronic spectra of 1-aryl-2-[β-[m]ferrocenophanyl]ethylenes and 1-aryl-3-[β-[m]ferrocenophanyl]-2-propenones. Has the bridge a specific effect on the substituent dependent d-d transition band?

AU Toma, S.; Gaplovsky, A.; Elecko, P.; Gajda, V.

CS Dep. Org. Chem., Comenius Univ., Bratislava, 842 15, Czech.

SO Acta Facultatis Rerum Naturalium Universitatis Comenianae, Chimia (1985), 33, 157-63

CODEN: AFRCAQ; ISSN: 0524-2312

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB Title compds. I (m = 3,5; X = a bond, CO; R = 4-OMe, H, 3-Cl, 4-cyano) were prepared and their electronic spectra recorded. The position of the d-d band depended on the substituent, but no specific effect of the bridge on its position was observed

L7 ANSWER 47 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:609145 CAPLUS

DN 105:209145

TI Chiral α-ferrocenylalkylamines

AU Herrmann, Rudolf; Huebener, Gerd; Siglmüller, Franz; Ugi, Ivar

CS Org.-Chem. Inst., Tech. Univ. München, Garching, 8046, Fed. Rep. Ger.

SO Liebigs Annalen der Chemie (1986), (2), 251-68

CODEN: LACHDL; ISSN: 0170-2041

DT Journal

LA German

OS CASREACT 105:209145

AB The preparation of chiral α-ferrocenylalkylamines by resolution of the racemates is described. In some cases, both of the enantiomers can be obtained with the aid of a single chiral reagent. The diastereoselective syntheses of α-ferrocenylalkylamines with 2 chiral centers take advantage of the kinetics and thermodyn. of the reactions of α-ferrocenylalkyl carbocations. The amines thus prepared have been tested as chiral inducing templates in the synthesis of models of peptides by stereoselective 4-component condensation.



L7 ANSWER 48 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1985:523659 CAPLUS  
 DN 103:123659  
 TI Synthesis and electronic spectra of 1-aryl-2-ferrocenylethylenes  
 AU Toma, S.; Gaplovsky, A.; Elecko, P.  
 CS Fac. Nat. Sci., Komensky Univ., Bratislava, CS-842 15, Czech.  
 SO Chemical Papers (1985), 39(1), 115-24  
 CODEN: CHPAEG; ISSN: 0366-6352  
 DT Journal  
 LA English  
 AB Fourteen 1-aryl-2-ferrocenylethylenes  $\text{FcCH:CHC}_6\text{H}_4\text{R}$  (Fc = ferrocenyl; R = H, halo, MeO, etc.) were synthesized from ferrocene and substituted phenylacetic acids. Those bearing electron-accepting groups were prepared by Wittig reaction from  $\text{FcCH}_2\text{PPh}_3^+ \text{I}^-$  iodide and aromatic aldehydes. Relationship between the electronic spectra, especially of the so-called d-d band at about 440 nm and the effect of substituent of the title products was investigated.

L7 ANSWER 49 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1983:488333 CAPLUS  
 DN 99:88333  
 TI Cyclophanes. Part 20. New link between cyclophane and ferrocene chemistry  
 AU El-Tamany, Sayed; Raulfs, Friedrich Wilhem; Hopf, Henning  
 CS Inst. Org. Chem., Tech. Univ. Braunschweig, Braunschweig, D-3300, Fed. Rep. Ger.  
 SO Angewandte Chemie (1983), 95(8), 631  
 CODEN: ANCEAD; ISSN: 0044-8249  
 DT Journal  
 LA German  
 GI For diagram(s), see printed CA Issue.  
 AB The reaction of formylparacyclophane I with formylferrocene gave 33% II. Similarly, cyclophane III complexed with Fe to give IV.

L7 ANSWER 50 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1983:453922 CAPLUS  
 DN 99:53922  
 TI The synthesis and studies of several [2.2.2]ferrocenophane derivatives  
 AU Kasahara, Akira; Izumi, Taeko; Shimizu, Iwao; Oikawa, Tadashi; Umezawa, Hiroshi; Hoshino, Isao  
 CS Fac. Eng., Yamagata Univ., Yonezawa, 992, Japan  
 SO Bulletin of the Chemical Society of Japan (1983), 56(4), 1143-8  
 CODEN: BCSJA8; ISSN: 0009-2673  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Several ferrocenophanes I-III ( $\text{RR}_1 = \text{bond}$ ;  $\text{R} = \text{R}_1 = \text{E-H}$ ) were synthesized via the Ti-induced reductive coupling of the corresponding formyl compds. The transannular  $\pi$ -electronic interactions between the 2 chromophores were examined on the basis of the electron spectra.

L7 ANSWER 51 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1982:527772 CAPLUS  
 DN 97:127772  
 TI Synthesis and crystal and molecular structure of [E]-1-phenyl-2-ferrocenyl-1-nitroethene  
 AU Grzesiak, Elzbieta; Kaluski, Zygmunt; Skrzypczak-Jankun, Ewa; Ratajczak, Aleksander; Zmuda, Henryk  
 CS Inst. Chem., Adam Mickiewicz Univ., Poznan, 60-780, Pol.  
 SO Bulletin de l'Academie Polonaise des Sciences, Serie des Sciences Chimiques (1981), 29(1-2), 31-9

CODEN: BAPCAQ; ISSN: 0001-4095

DT Journal

LA English

AB The x-ray crystal structure of the title compound, prepared by condensation of formylferrocene with PhCH<sub>2</sub>NO<sub>2</sub>, indicated that the conformation is almost staggered. The rotation angle is 32.3(5)°.

L7 ANSWER 52 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1982:217988 CAPLUS

DN 96:217988

TI Synthesis of organosilyl compounds containing the ferrocene nuclei

AU Wu, Guanli; Liu, Shuqing; Liao, Zengkun

CS Inst. Chem., Acad. Sin., Beijing, Peop. Rep. China

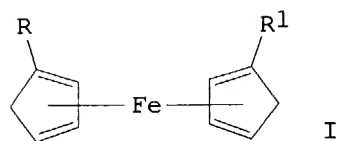
SO Huaxue Xuebao (1982), 40(1), 67-72

CODEN: HHHPA4; ISSN: 0567-7351

DT Journal

LA Chinese

GI



AB I (R = SiEt<sub>2</sub>CH:CH<sub>2</sub>, R<sub>1</sub> = H) was prepared from ferrocene (II), BuLi and ClSiEt<sub>2</sub>CH:CH<sub>2</sub>. I (R = R<sub>1</sub> = SiR<sub>2</sub>R<sub>3</sub>; R<sub>2</sub>, R<sub>3</sub> = Me, Me; Bu, Bu; Ph, Me) were prepared from II, n-C<sub>5</sub>H<sub>11</sub>Na and R<sub>2</sub>R<sub>3</sub>SiCl. I (R = R<sub>1</sub> = CMeR<sub>4</sub>OH; R<sub>4</sub> = PhCH<sub>2</sub>, Bu, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>SiMe<sub>3</sub>) were prepared from diacetylferrocene and R<sub>4</sub>MgX (X = Cl, Br).

L7 ANSWER 53 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1981:515713 CAPLUS

DN 95:115713

TI The electrophilic substitution of ferrocene by protonated carbonyl compounds

AU Herrmann, Rulldolf; Ugi, Ivar

CS Inst. Org. Chem., Tech. Univ. Muenchen, Garching, 8046, Fed. Rep. Ger.

SO Tetrahedron (1981), 37(5), 1001-9

CODEN: TETRAB; ISSN: 0040-4020

DT Journal

LA English

AB Reaction of ferrocene with aldehydes and ketones in strongly acidic media gave α-ferrocenylalkyl carbenium ions which deprotonated to give ferrocenylethene derivs. or were trapped by mercaptans or amines to give α-ferrocenylalkylsulfones and -amines, resp. E.g., treatment of ferrocene with Me<sub>3</sub>CCHO (Cl<sub>3</sub>CCO<sub>2</sub>H, FSO<sub>3</sub>H, AcOH, under N, -10 to 0°, 20-45 min) gave the carbenium ion which, on addition of HSCH<sub>2</sub>CO<sub>2</sub>Me (0°, 15 min), gave 74% Me<sub>3</sub>CCHRSCH<sub>2</sub>CO<sub>2</sub>Me (R = α-ferrocenyl). The reaction mechanisms are discussed.

L7 ANSWER 54 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1981:47448 CAPLUS

DN 94:47448

TI Stable carbocations. Part 22. Stereochemistry of the deprotonation of ferrocenylalkylium ions, and of the protonation of alkenylferrocenes

AU Bunton, Clifford A.; Crawford, William; Cully, Norman; Watts, William E.

CS Dep. Chem., Univ. California, Santa Barbara, CA, 93106, USA  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and  
 Bio-Organic Chemistry (1972-1999) (1980), (10), 2213-17  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 AB In the absence of adverse steric effects, ferrocenylalkylium ions of type  
 $\text{FcC}^+\text{RCH(Ph)Me}$  (Fc = ferrocenyl) (R = H, Me, Ph) underwent preferential  
 exo-deprotonation on reaction with base. Similar exo-stereoselectivity  
 was associated with protonation of the resulting alkenes  $\text{FcCR:C(Ph)Me}$  (R as  
 before) in  $\text{CF}_3\text{CO}_2\text{H}$ .

L7 ANSWER 55 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1980:181324 CAPLUS  
 DN 92:181324  
 TI Use of two-phase systems in syntheses of ferrocene derivatives  
 AU Boev, V. I.; Dombrovskii, A. V.  
 CS Nezhin. Pedagog. Inst., Nezhin, USSR  
 SO Zhurnal Obshchei Khimii (1980), 50(1), 121-5  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DT Journal  
 LA Russian  
 OS CASREACT 92:181324  
 AB  $\text{FcCH:CH}_2$ ,  $\text{FcCH:CHPh}$  and  $\text{FcCH:CHCO}_2\text{R}$  (I, Fc = ferrocenyl, R = Et, Pr, Bu)  
 were prepared by the Wittig and Horner reaction using a two-phase system.  
 Thus, treating  $\text{FcCHO}$  with  $(\text{EtO})_2\text{POCH}_2\text{CO}_2\text{R}$  in presence of  $\text{Bu}_4\text{NI}$  in the  
 two-phase system  $\text{CH}_2\text{Cl}_2$ -50% NaOH gave I.

L7 ANSWER 56 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1979:611545 CAPLUS  
 DN 91:211545  
 TI Synthesis of [2]paracyclo[2]paracyclo[2](1,1')ferrocenophane derivatives  
 AU Kasahara, Akira; Izumi, Taeko; Shimizu, Iwao  
 CS Fac. Eng., Yamagata Univ., Yonezawa, 992, Japan  
 SO Chemistry Letters (1979), (9), 1119-22  
 CODEN: CMLTAG; ISSN: 0366-7022  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The title compds. I (Z = CH:CH, C.tplbond.C) were prepared in 2.2, 15%  
 yields resp. by reaction of 1,1'-diiodoferrocene with  $\text{CH}_2\text{:CHC}_6\text{H}_4\text{CHO-p}$  or  
 $\text{CH.tplbond.CC}_6\text{H}_4\text{CH(OEt)}_2\text{-p}$  to give II in 55, 27% yields resp. which were  
 cyclized with  $\text{TiCl}_3\text{-LiAlH}_4$ .

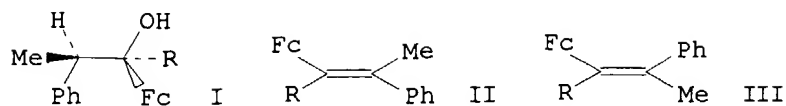
L7 ANSWER 57 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1978:597684 CAPLUS  
 DN 89:197684  
 TI Stereochemistry of metallocenes. 41. Ferrocenederivatives. 62.  
 Syntheses and stereochemistry of metalloceno cycloocta-1,5-dienes:  
 [2]orthocyclo[2](1,2)benzotrenophane and -ferrocenophane,  
 [2.2](1,2)ferrocenophane  
 AU Benedikt, Michael; Schloegl, Karl  
 CS Inst. Org. Chem., Univ. Wien, Vienna, Austria  
 SO Monatshefte fuer Chemie (1978), 109(4), 805-22  
 CODEN: MOCMB7; ISSN: 0026-9247  
 DT Journal  
 LA English  
 AB The title compds. I, II and III were prepared for configurational and  
 conformational studies-mainly in comparison with cyclophanes of related  
 structures, such as [2.2]orthocyclophane (IV). Whereas I was accessible  
 in 1-step from IV and  $\text{Cr(CO)}_6$ , the ferrocenophanes II, III were prepared by  
 stepwise reaction sequence starting with a Wittig reaction: thereby

hydroxymethylated ferrocenyl Ph and diferrocenyl ethylenes were obtained in which (after hydrogenation to the corresponding ethanes) the CH<sub>2</sub>OH groups were transformed into acetic acid residues. Subsequent ring closure and reduction of the cyclic ketones afforded the desired phanes, of which III was obtained as a 3:1 mixture of the trans and cis isomers. The configurational assignment was based mainly on the <sup>1</sup>H-NMR spectra. Conformational possibilities especially of III are briefly discussed and tentative conformation are assigned to the stereoisomers of III.

L7 ANSWER 58 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:529658 CAPLUS  
DN 89:129658  
TI Reactions of some ferrocenyl- and 2-thienylacetylenes  
AU Siegel, Alan; Rausch, Marvin D.  
CS Dep. Chem., Indiana State Univ., Terre Haute, IN, USA  
SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (1978), 8(3), 209-26  
CODEN: SRIMCN; ISSN: 0094-5714  
DT Journal  
LA English  
AB Addition reactions of RC.tplbond.CR1 [R = ferrocenyl, R1 = Ph, 2-thienyl, ferrocenyl; R = Ph, R1 = 2-thienyl (I)] including reactions with acyl chlorides and POCl<sub>3</sub> to add HCl, hydration to add H<sub>2</sub>O, and addition of BuLi gave olefins. Thus, FcC.tplbond.CPh (II) and AcCl-AlCl<sub>3</sub> gave 8-18% cis- and trans-FcClC:CHPh (Fc = ferrocenyl). Also, treatment of I and II with tetraphenylcyclopentadienone gave 78% 2-(pentaphenylphenyl)thiophene and 52% pentaphenylphenylferrocene, resp.

L7 ANSWER 59 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:170214 CAPLUS  
DN 88:170214  
TI The reaction of ortho-palladated ferrocene complexes with olefins  
AU Izumi, Taeko; Endo, Kazuyoshi; Saito, Osamu; Shimizu, Iwao; Maemura, Mitsugi; Kasahara, Akira  
CS Fac. Eng., Yamagata Univ., Yonezawa, Japan  
SO Bulletin of the Chemical Society of Japan (1978), 51(2), 663-4  
CODEN: BCSJA8; ISSN: 0009-2673  
DT Journal  
LA English  
GI For diagram(s), see printed CA Issue.  
AB Ortho palladation products of (dimethylaminomethyl)ferrocene (I) and 2-pyridylferrocene (II) were treated with various olefins under mild conditions to give a variety of unusual 1,2-disubstituted ferrocene derivs., e.g., III (R = H, Me; R1 = Ph, CO<sub>2</sub>Et, CO<sub>2</sub>Me, CN, COMe, CPh) and IV (R = COMe, CPh).

L7 ANSWER 60 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:136007 CAPLUS  
DN 88:136007  
TI Stereochemistry of proton transfer to alkenylferrocenes and of deprotonation of ferrocenylalkylium ions  
AU Bunton, Clifford A.; Crawford, William; Watts, William E.  
CS Dep. Chem., Univ. California, Santa Barbara, CA, USA  
SO Tetrahedron Letters (1977), (42), 3755-8  
CODEN: TELEAY; ISSN: 0040-4039  
DT Journal  
LA English  
GI



AB Alcs. I (R = H, Ph; Fc = ferrocenyl) on sequential heterolysis (CF<sub>3</sub>CO<sub>2</sub>H), equilibration, and quenching (Na<sub>2</sub>CO<sub>3</sub>) gave a mixture of alkenes II and III. Similar treatment of I (R = Me) gave mainly CH<sub>2</sub>:C(Fc)CHMePh and small amts. of II (R = Me) and III (R = Me). Studies of the ratios of II to III obtained by immediate quenching (Na<sub>2</sub>CO<sub>3</sub> or KOCMe<sub>3</sub>/HOCMe<sub>3</sub>) of the cations prepared by dissolving II in cold CF<sub>3</sub>CO<sub>2</sub>H showed that exo deprotonation and protonation were preferred. Similar protonation was observed for systems in which Fc-C<sup>+</sup> rotation is prevented.

L7 ANSWER 61 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1978:89812 CAPLUS

DN 88:89812

TI A convenient synthesis of ferrocenylalkenes

AU Chen, S. C.; Lee, C. C.; Sutherland, R. G.

CS Dep. Chem. Chem. Eng., Univ. Saskatchewan, Saskatoon, SK, Can.

SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (1977), 7(6), 565-9

CODEN: SRIMCN; ISSN: 0094-5714

DT Journal

LA English

AB Acylation of ferrocene with RCl (R = Ac, EtCO, Me<sub>2</sub>CHCO, PhCH<sub>2</sub>CO, Ph<sub>2</sub>CHCO) gave RFc (Fc = ferrocenyl), which, reduced with LiAlH<sub>4</sub> and treated with 20% HCl gave 75-89% R<sub>1</sub>Fc (R<sub>1</sub> = H<sub>2</sub>C:CH, trans-MeCH:CH, Me<sub>2</sub>C:CH, trans-PhCH:CH, Ph<sub>2</sub>C:CH).

L7 ANSWER 62 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1977:439634 CAPLUS

DN 87:39634

TI Palladium-catalyzed reaction of olefins and acetylenes with iodoferrocenes

AU Kasahara, Akira; Izumi, Taeko; Maemura, Mitsugi

CS Fac. Eng., Yamagata Univ., Yonezawa, Japan

SO Bulletin of the Chemical Society of Japan (1977), 50(4), 1021-2

CODEN: BCSJA8; ISSN: 0009-2673

DT Journal

LA English

AB Iodoferrocene (I) reacts readily with olefinic compds. in the presence of Pd(OAc)<sub>2</sub> to produce alkenylferrocene derivs. In the presence of a copper(I) iodide and Pd complex, I also reacts with RC.tplbond.CH (R = H, Ph) to afford diferrocenylacetylene andferrocenylphenylacetylene, resp.

L7 ANSWER 63 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1976:179179 CAPLUS

DN 84:179179

TI Aromatic substitution of olefins. XXV. Reactivity of benzene, naphthalene, ferrocene, and furan toward styrene, and the substituent effect on the reaction of monosubstituted benzenes with styrene

AU Fujiwara, Yuzo; Asano, Ryuzo; Moritani, Ichiro; Teranishi, Shiichiro

CS Fac. Eng. Sci., Osaka Univ., Toyonaka, Japan

SO Journal of Organic Chemistry (1976), 41(10), 1681-3

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

AB The relative reactivity of aromatic compds. toward PhCH:CH<sub>2</sub> in the presence of Pd(OAc)<sub>2</sub>, examined by competitive reactions, increased in the order: benzene < naphthalene < ferrocene < furan. Partial rate factors for the

reaction PhR (R = Me, Et, OMe, Cl, NO<sub>2</sub>) with PhCH:CH<sub>2</sub> to give the trans-RC<sub>6</sub>H<sub>4</sub>CH:CHPh were determined and the substituent effects were discussed. The reaction involved an electrophilic attack of Pd<sup>2+</sup> on the aromatic ring to form an aromatic Pd  $\sigma$  complex.

L7 ANSWER 64 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1975:140278 CAPLUS

DN 82:140278

TI Formation of ethynylferrocenes in reactions of sterically crowded acetylferrocenes with a Grignard reagent

AU Abram, T. S.; Watts, W. E.

CS Sch. Phys. Sci., New Univ. Ulster, Coleraine, UK

SO Journal of Organometallic Chemistry (1975), 86(1), 109-18

CODEN: JORCAI; ISSN: 0022-328X

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB Acetylferrocenes bearing a bulky 2-alkyl substituent (e.g. I, R = Ac) react with Me<sub>2</sub>CHMgBr to give enolate salts which are converted into ethynylferrocenes (e.g. I, R = C.tplbond.CH) by thermally induced elimination.

L7 ANSWER 65 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1974:70933 CAPLUS

DN 80:70933

TI Metallocenes. IX. Reduction of ketones by triphenyltin hydride and acetyl chloride. Selective reduction of 1,1'-diacylferrocenes

AU Patin, Henri; Dabard, Rene

CS Lab. Chim. Org. E, Univ. Rennes, Rennes, Fr.

SO Bulletin de la Societe Chimique de France (1973), (9-10, Pt. 2), 2756-9

CODEN: BSCFAS; ISSN: 0037-8968

DT Journal

LA French

AB Reduction of FcCOR (Fc = ferrocenyl; R = Me, Et, Pr, Ph, PhCH<sub>2</sub>, 2-thienyl) by Ph<sub>3</sub>SnCl-AcCl gave 40-90% FcCH<sub>2</sub>R, the yields decreasing with increasing size of R. A similar selectivity was found with 1,1'-diacylferrocenes; single reduction to give 1,1'-acyl(alkyl)ferrocenes always exceeded double reduction to give 1,1'-dialkylferrocenes. The postulated acetate intermediate was isolated for 1-(phenylacetyl)-1'-(2-thienoyl)ferrocene.

L7 ANSWER 66 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1972:153902 CAPLUS

DN 76:153902

TI Palladium-catalyzed ferrocenylation of olefins

AU Kasahara, Akira; Izumi, Taeko; Saito, Genji; Yodono, Minoru; Saito, Ryuichi; Goto, Yoshiaki

CS Fac. Eng., Yamagata Univ., Yonezawa, Japan

SO Bulletin of the Chemical Society of Japan (1972), 45(3), 895-900

CODEN: BCSJA8; ISSN: 0009-2673

DT Journal

LA English

AB Ferrocenylpalladium chloride, prepared in situ from chloro-mercuriferrocene and lithium chloropalladate, reacts readily with various olefins to produce alkenylferrocene derivs. Enol esters and allylic alcs. also react to form (2-oxoalkyl)- and (3-oxoalkyl)-ferrocene derivs. The synthesis of 1,1'-dialkenylferrocene derivs. from 1,1'-bis(chloromercuri)ferrocene, olefins and Pd salt is also reported. The reaction may proceed by means of a catalytic amount of the metal salt and by the aid of CuCl<sub>2</sub>; it provides an extremely convenient method for the synthesis of a wide variety of ferrocene derivs.

L7 ANSWER 67 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1972:14691 CAPLUS  
 DN 76:14691  
 TI Aromatic substitution of olefins. XVII. Reactions of ferrocene with olefins in the presence of palladium(II) salts  
 AU Asano, Ryuzo; Moritani, Ichiro; Sonoda, Akio; Fujiwara, Yuzo; Teranishi, Shiichiro  
 CS Fac. Eng. Sci., Osaka Univ., Osaka, Japan  
 SO Journal of the Chemical Society [Section] C: Organic (1971), (22), 3691-2  
 CODEN: JSOOAX; ISSN: 0022-4952  
 DT Journal  
 LA English  
 AB Ferrocene reacted with styrene, CH<sub>2</sub>:CHCN, CH<sub>2</sub>:CHCO<sub>2</sub>Me, acrolein, and CH<sub>2</sub>:CHOBu in the presence of Pd(OAc)<sub>2</sub> to give alkenylferrocenes; the reactivity of the olefin is increased by electron-withdrawing groups.

L7 ANSWER 68 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1970:531114 CAPLUS  
 DN 73:131114  
 TI Aromatic substitution of olefins. Reaction of ferrocene with styrene in the presence of palladium(II) acetate  
 AU Asano, Ryuzo; Moritani, Ichiro; Fujiwara, Yuzo; Teranishi, Shiichiro  
 CS Fac. Eng. Sci., Osaka Univ., Toyonaka, Japan  
 SO Journal of the Chemical Society [Section] D: Chemical Communications (1970), (20), 1293  
 CODEN: CCJDAO; ISSN: 0577-6171  
 DT Journal  
 LA English  
 AB trans- $\alpha$ -Styrylferrocene was prepared in 20% yield by treatment of ferrocene with styrene in the presence of Pd(OAc)<sub>2</sub>, by catalytic substitution of a H in the cyclopentadienyl group.

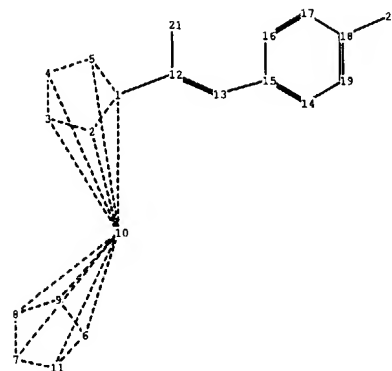
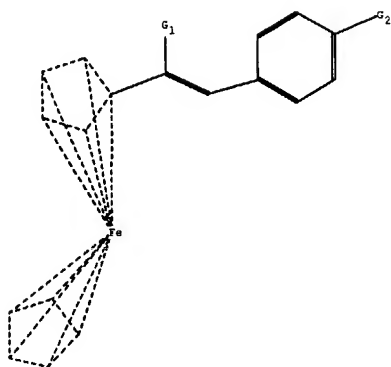
L7 ANSWER 69 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1970:414960 CAPLUS  
 DN 73:14960  
 TI Friedel-Crafts acetylation of ferrocene analogs of benzophenone, diphenylmethane, and stilbene  
 AU Toma, S.; Kaluzayova, E.  
 CS Fac. Nat. Sci., Komensky Univ., Bratislava, Czech.  
 SO Chemicke Zvesti (1969), 23(7), 540-52  
 CODEN: CHZVAN; ISSN: 0366-6352  
 DT Journal  
 LA English  
 AB The Friedel-Crafts acetylations of benzophenone (I), diphenylmethane (II), and stilbene (III) ferrocene analogs were studied to determine their reactivity. In all cases, ferrocenyl aryl ketone substitution occurred in the unsubstituted cyclopentadiene ring of ferrocene. In the I analog, but not in the II or III, ferrocene was more reactive than thiophene and furan. The results confirmed the conclusions of Schloegl (1964).

L7 ANSWER 70 OF 70 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1969:3087 CAPLUS  
 DN 70:3087  
 TI Studies in ferrocene derivatives. V. Synthesis and nuclear magnetic resonance spectra of some ferrocenyl ethylenes  
 AU Horspool, William M.; Sutherland, Ronald G.  
 CS Univ. Dundee, Dundee, UK  
 SO Canadian Journal of Chemistry (1968), 46(22), 3453-6  
 CODEN: CJCHAG; ISSN: 0008-4042  
 DT Journal  
 LA English

AB Ferrocenylethylenes are readily synthesized from acylferrocenes and the appropriate triphenylphosphorane in dimethyl sulfoxide. Details of the N.M.R. spectra of 12 ethylenes were recorded.



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chain nodes :

12 13 21 23

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 14 15 16 17 18 19

chain bonds :

1-12 12-13 12-21 13-15 18-23

ring bonds :

1-2 1-5 1-10 2-3 2-10 3-4 3-10 4-5 4-10 5-10 6-9 6-11 6-10  
7-8 7-11 7-10 8-9 8-10 9-10 10-11 14-15 14-19 15-16 16-17  
17-18 18-19

exact/norm bonds :

1-2 1-5 1-10 2-3 2-10 3-4 3-10 4-5 4-10 5-10 6-9 6-11 6-10  
7-8 7-11 7-10 8-9 8-10 9-10 10-11 12-21 18-23

exact bonds :

1-12 12-13 13-15

normalized bonds :

14-15 14-19 15-16 16-17 17-18 18-19

G1:H,CH3,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu

G2:H,CH3,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,X

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom  
10:Atom 11:Atom 12:CLASS 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom  
18:Atom 19:Atom 21:CLASS 23:CLASS